

CHAPTER 4

The U.S. Economy: Private and Public Sectors

3-6

The U.S. economy is divided into a private sector and a public sector. The first half of Chapter 4 discusses the private sector—the characteristics of millions of households and business firms. The second half of Chapter 4 describes the public sector—the functions and financing of the Federal, state, and local governments. Learning about these two sectors will give you the basic facts and framework you need for understanding the U.S. economy.

Chapter 4 begins with an examination of the **households** of the economy. Two different distributions of household income are examined. The way in which the total personal income received by all U.S. households is divided among the five types of earned income is called the *functional distribution of income*. The way in which the total personal income received by all households is distributed among the various income classes is called the *personal distribution of income*. Households dispose of the income they receive by spending money on *personal consumption expenditures*, paying *personal taxes*, or allocating funds to *personal saving*.

Businesses in the United States are also a focus of the chapter. It is apparent that what most characterizes U.S. businesses is the differences among firms in size and legal form, as well as in the products they produce. You should note the distinctions between a *sole proprietorship*, a *partnership*, and a *corporation*. You will also learn about the principal-agent problem with corporations that can arise from the separation of ownership (the principals) and management (the agents).

Chapter 4 also introduces you to the five basic functions performed by **government** in the U.S. economy. The chapter does not attempt to list all the specific ways in which government affects the behavior of the economy. Instead, it provides a general classification and description of the five functions that government performs.

The chapter also returns to the **circular flow model** first presented in Chapter 2. The model has now been modified to include government along with business and household sectors. This addition changes the real and monetary flows in the model.

The facts of **government finance** in the United States are presented in the final sections of Chapter 4. The organization of the discussion is relatively simple. First, the trends for taxes collected and expenditures made by all levels of government—Federal, state, and local—are examined. Second, an explanation is given for the major items on which the Federal government spends its income, the principal taxes it levies to obtain its income, and the relative importance of these taxes. Third, the chapter

closes with a look at the major expenditures and taxes of the state and local governments.

■ CHECKLIST

When you have studied this chapter you should be able to

- ☐ Define and distinguish between a functional and a personal distribution of income.
- ☐ State the five sources of personal income in the functional distribution.
- ☐ List the three uses for which households dispose of their personal incomes and state the relative size of each.
- ☐ Distinguish among durable goods, nondurable goods, and services in personal consumption expenditures.
- ☐ Give definitions for a plant, a firm, and an industry.
- ☐ List the three legal forms of business enterprise.
- ☐ Describe the advantages of corporations in finance, risk and liability, and longevity.
- ☐ Explain the principal-agent problem as it applies to corporations.
- ☐ List the five economic functions of government in the United States.
- ☐ Give examples of how government provides the legal framework for the economy.
- ☐ Define monopoly and explain why government wishes to prevent monopoly and to maintain competition in the economy.
- ☐ Explain why government redistributes income and list the three principal policies it uses for this purpose.
- ☐ Define negative externality and positive externality.
- ☐ Explain why a competitive market fails to allocate resources efficiently when there are external costs and benefits.
- ☐ List two actions government can take to reduce external costs.
- ☐ List three actions government can take to encourage external benefits.
- ☐ Give definitions of a public good and a quasi-public good.
- ☐ Explain how the government reallocates resources from the production of private goods to the production of public or quasi-public goods.
- ☐ Describe the two macroeconomic stabilization policies of government and the two main economic problems they are designed to address.
- ☐ Explain the qualifications to government's role in the economy.

- ☐ Draw the circular flow model that includes businesses; households, and government.
- ☐ Explain the difference between government purchases and transfer payments and the effect of each on the composition of national output.
- ☐ Identify the four largest categories of Federal expenditures.
- ☐ List the three main sources of Federal tax revenues.
- ☐ Define and explain the differences between marginal and average tax rates.
- ☐ Identify the major expenditures by state and local governments.
- ☐ Describe how state and local governments raise tax revenue.
- ☐ Explain the problems facing the Social Security program and what solutions have been proposed (Last Word).

■ CHAPTER OUTLINE

1. Households play a dual role in the economy. They supply the economy with resources, and they purchase the greatest share of the goods and services produced by the economy. They obtain their personal incomes in exchange for the resources they furnish the economy and from the transfer payments they receive from government.

a. The **functional distribution of income** indicates the way in which total personal income is divided among the five sources of earned income in 2007: wages and salaries (71%); proprietors' income (9%); corporate profits (14%); interest (5%); and rents (1%).

b. The **personal distribution of income** indicates the way in which total personal income is divided among households in different income classes. The 2006 data show an unequal distribution of income by five household classes (20% of household in each). The percentage of total personal income by class is: lowest (3.4%); second (8.6%); middle (14.5%); fourth (22.9%), and highest (50.5%).

2. Households use their incomes to pay taxes, accumulate savings, and purchase consumer goods.

a. **Personal taxes** constitute a deduction from a household's personal income; what remains after taxes can be either saved or spent. Taxes account for 13% of household income.

b. **Saving** is what a household does not spend of its after-tax income. It was 1 percent in 2007.

c. **Personal consumption expenditures** account for most of the disposition of household income (86% in 2007). This category is spent on **durable goods** (11%)—products with lives of three or more years, **nondurable goods** (29%)—products with lives of less than three years, and **services** (60%)—work or a product supplied by others for a consumer.

3. The businesses of the U.S. economy consist of three major types of entities. A **plant** is a physical structure that produces a product. A **business firm** is an organization

that owns and operates plants. (Multiplant firms may be horizontally or vertically integrated, or they may be conglomerates.) An **industry** is a group of firms producing the same or similar goods or services.

4. There are three principal **legal forms** of business firms. The **sole proprietorship** is a business owned and operated by a single person. The **partnership** is a business owned and operated by two or more persons. The **corporation** is a legal entity that operates as a business. The dominant form of business is the corporation. Although they represent only 20 percent of U.S. business firms, they account for 84 percent of total sales or output value.

a. Corporations have several advantages. They can raise substantial financial capital through the sale of **stocks** (equity financing), which represents a share of ownership in the corporation. They can also obtain funds through the sale of corporate **bonds** (debt financing), which is similar to a loan to a corporation from the bond buyer and over time the corporation pays the bond buyer interest on the amount of the bond. Corporations also provide **limited liability** for their owners (the stockholders) because they are only liable for losses that would equal the value of their stock holdings and the stockholders cannot be sued as individuals. Corporations, as legal entities, have unlimited life independent of their current owners and managers, and thus they can make long-term plans for continued growth.

b. Large corporations are a major feature of the U.S. economy, but their size creates a **principal-agent problem**. This problem arises from the separation of corporate ownership (by stockholders) and control (by corporate executives). This problem can sometimes be overcome by aligning the interests of executives with those of stockholders through stock payment plans.

5. Government performs five economic functions.

a. The first of these functions is to provide the **legal framework and services** that contribute to the effective operation of the market economy.

b. The second function of government is to **maintain competition** by controlling **monopoly** through regulation and antitrust laws. (A monopoly is the domination of an industry by a single seller.)

c. Government performs its third function when it **redistributes income** to reduce income inequality. The policies and programs it uses to achieve this objective are transfer payments, market interventions (changing market prices), and taxation.

d. When government **reallocates resources** it performs its fourth function; in doing so it addresses externality problems or provides public goods.

(1) It reallocates resources to take into account negative or positive externalities or spillovers from market outcomes.

(a) **Negative externalities** are production or consumption costs paid for by a third party without compensation. For example, when a corporation pollutes the environment while making a product and neither the

corporation nor the consumer of the product pays for the cost of that pollution, then the pollution cost is an external cost that is borne by third parties, who are the other members of society adversely affected by the pollution.

(b) Negative externalities can be discouraged either with legislation (prohibiting practices which create external costs); or by imposing taxes (and thus raising the cost of production). Some negative externalities get resolved through private bargaining if the externalities are not widespread and the negotiating costs can be kept low.

(c) **Positive externalities** are outcomes that benefit third parties without these parties paying for the benefits. Health immunizations and education are examples of services that have external benefits to others who do not pay for the services.

(d) External benefits can be encouraged by subsidizing consumers or producers (or by having government provide the goods when the external benefits are large).

(2) Government provides **public goods**. These goods have the characteristics of **nonrivalry** (benefits are not reduced by consumption by others) and **nonexcludability** (people cannot be excluded from the benefits). Examples of such public goods would be national defense or street lighting. The inability to exclude people from a public good once they exist creates a **free-rider problem**, in which people can receive the benefit of the public good without contributing to its cost.

(3) Government also provides **quasi-public goods** that have large external benefits. Although these goods (such as education) can be provided by the private market, because people can be excluded from obtaining them if they do not pay they will be underproduced or underconsumed if left to the private market alone. Government will provide access to these goods at a reduced cost to encourage their production or consumption and increase the external benefits.

(4) Government levies taxes and uses tax revenues to reallocate income and resources from private uses to public ones (for providing public and quasi-public goods).

e. The fifth function of government is to promote macroeconomic stabilization of the economy by controlling inflation and reducing unemployment. It does so through the prudent use of **fiscal policy** (government spending and taxation) and **monetary policy** (interest rates set by the nation's central bank).

f. The economic role of government is conducted in the context of politics. This process can lead to imperfect and inefficient outcomes.

6. A **circular flow model** that was first introduced in Chapter 2 showed business firms and households in the private sector of the economy. In Chapter 4 the public sector is now added. It shows that government purchases public goods from private businesses, collects taxes from and makes transfer payments to these firms, purchases labor services from households, collects taxes from and makes transfer payments to these households, and can alter the distribution of income, reallocate resources, and change the level of economic activity by affecting the real and monetary flows in the diagram.

7. **Government finance** is important in the economy. Total government spending consists of **government purchases** of goods and services and **transfer payments** (payments made to people for which no contribution is made by the people in return for them). The two types of spending have different effects on the economy. Government purchases are **exhaustive** because they directly use the economy's resources, while transfers are **nonexhaustive**. Total government spending is equal to three-tenths (31.5%) of domestic output.

8. The expenditures and tax revenues for the Federal government are of several types.

a. **Federal Expenditures**: most spending goes for pensions and income security (34%), national defense (21%), health care (24%), and interest on the public debt (9%).

b. **Federal Tax Revenues**: the major sources are **personal income taxes** (45%), **payroll taxes** (34%), and **corporate income taxes** (14%).

(1) The Federal personal income tax is progressive, which means it is one whose average rate rises as income increases.

(2) The **average tax rate** is the total tax paid divided by total taxable income.

(3) The **marginal tax rate** is the rate paid on additional income.

9. State and local governments have different sources of revenue and spend their funds on different types of public goods.

a. **State governments** depend largely on **sales and excise taxes** (47%), and also personal income taxes (35%); they spend their revenues on education (36%), public welfare (28%), health care (7%), highways (7%), and public safety (4%).

b. **Local governments** rely heavily on **property taxes** (72%) and to some extent on sales and excise taxes (16%); they spend much of the revenue on education (44%), welfare and health care (12%), public safety (11%), housing, parks, sewerage (8%), and streets and highways (4%).

10. (Last Word). The Social Security program is financed by payments into the system from current workers, and these payments are made to current Social Security retirees. The program will experience financial problems in the future because the number of workers paying into the system is declining and the number of retirees receiving benefits is rising. Several options have been proposed to shore up the finances such as cutting program benefits, extending the retirement age, raising taxes, and setting up individual retirement accounts.

■ HINTS AND TIPS

1. This chapter is a long one, so do not try to learn everything at once. Break the chapter into its three natural parts and work on each one separately. The first part describes features of the private sector. The second part explains the functions of government. The third part looks at government finance.

2. There are many descriptive statistics about the private and public sectors. Avoid memorizing these statistics. Instead, look for the trends and generalizations that these statistics illustrate about the private or public sector. For example, the discussion of government finance describes recent trends in government expenditures and taxes and indicates the relative importance of taxes and expenditures at each level of government.

■ IMPORTANT TERMS

functional distribution of income	monopoly
personal distribution of income	externality
durable goods	negative externalities
nondurable goods	positive externalities
services	public goods
plant	free-rider problem
firm	quasi-public goods
industry	government purchases
sole proprietorship	transfer payments
partnership	personal income tax
corporation	marginal tax rate
stock	average tax rate
bond	payroll taxes
limited liability	corporate income tax
principal-agent problem	sales and excise taxes
	property taxes

SELF-TEST

■ FILL-IN QUESTIONS

- There are approximately 114 million (businesses, households) _____ in the United States. They play a dual role in the economy because they (sell, buy) _____ their resources and _____ most of the total output of the economy.
- Data on the functional distribution of household income shows that the largest single source in the United States is (rents, wages and salaries) _____ and the smallest is _____.
- Data on the personal distribution of household income in the United States show that about 3 percent of household income is received by the (poorest, richest) _____ 20 percent of households, and about 50 percent of household income is received by the _____ 20 percent of households.
- The total income of households is disposed of in three ways: personal _____, personal _____, and personal _____.

5. If a product has an expected life of three years or more it is a (durable, nondurable) _____ good; whereas if it has an expected life of less than three years it is a _____ good.

6. There are millions of business (firms, industries) _____ in the United States. The legal form of the great majority of them is the (sole proprietorship, partnership, corporation) _____, but the legal form that produces about 84 percent of the sales of the U.S. economy is the _____.

7. Shares of ownership of corporations are called (stocks, bonds) _____, and promises by corporations to repay a loan, usually at a fixed rate of interest are _____. The liabilities of corporations are (limited, unlimited) _____, and the lifespan for a corporation is _____.

8. The separation of ownership and control in a corporation may create a (free-rider, principal-agent) _____ problem. In this case, stockholders would be the (riders, principals, agents) _____ and managers would be the _____.

9. List the five economic functions of government.

- _____
- _____
- _____
- _____
- _____

10. To control monopoly, the U.S. government has created commissions to (tax, regulate) _____ natural monopolies, and in cases at the local level, government has become an (agent, owner) _____. Government has also enacted (trust, antitrust) _____ laws to maintain competition.

11. The market system, because it is an impersonal mechanism, results in an (equal, unequal) _____ distribution of income. To redistribute income from the upper- to the lower-income groups, the government has provided (transfer, tax) _____ payments, engaged in (military, market) _____ intervention, and used the (income, sales) _____ tax to raise much of its revenues.

12. Government frequently reallocates resources when it finds instances of (market, public) _____ failure. The two major cases of such failure occur when the competitive market system either

- _____ or
- _____

13. There is an externality whenever some of the costs of producing a product accrue to people other than the (seller, buyer) _____ or some of the benefits from consuming a product accrue to people other than the _____. Competitive markets bring about an efficient allocation of resources only if there are no (private, external) _____ costs or benefits in the consumption and production of a good or service.

a. What two things can government do to make the market reflect external costs?

- (1) _____
(2) _____

b. What three things can government do to make the market reflect external benefits?

- (1) _____
(2) _____
(3) _____

14. One characteristic of a public good is (rivalry, non-rivalry) _____ and the other characteristic of a public good is (excludability, nonexcludability) _____. A private firm will not find it profitable to produce a public good because there is a (free-rider, principal-agent) _____ problem.

15. To reallocate resources from the production of private goods to the production of public and quasi-public goods, government reduces the demand for private goods by (taxing, subsidizing) _____ consumers and then uses the (profits, tax revenue) _____ to buy public or quasi-public goods.

16. To stabilize the economy with less than full employment, government may increase total spending by (increasing, decreasing) _____ its expenditures for public goods and services, or by (increasing, decreasing) _____ taxes. When there are inflationary pressures, the nation's central bank may decrease total spending by (raising, lowering) _____ interest rates and when there is high unemployment, it may increase total spending by _____ interest rates.

17. An examination of government finance reveals that since 1960 government purchases of goods and services as a percentage of domestic output have (increased, decreased) _____, and government transfer payments as a percentage of domestic output have (increased, decreased) _____. Government purchases of goods and services are (exhaustive, nonexhaustive) _____ because they absorb

resources, and government transfer payments are (exhaustive, nonexhaustive) _____ because they do not absorb resources or create output.

18. The most important source of revenue for the Federal government is the (personal income, payroll) _____ tax; next in importance is the _____ tax. The largest category of Federal expenditures is for (national defense, pensions and income security) _____.

19. Federal income tax rates are progressive, which means that people with (lower, higher) _____ incomes pay a larger percentage of that income as taxes than do persons with _____ incomes. The tax rate paid on an additional unit of income is the (average, marginal) _____ tax rate, while the total tax paid divided by the total taxable income is the _____ tax rate.

20. Many state governments rely primarily on the (property, sales) _____ tax and many local governments rely primarily on the _____ tax. The largest category of spending for both state and local governments is (education, public safety) _____.

■ TRUE-FALSE QUESTIONS

Circle T if the statement is true, F if it is false.

1. The personal distribution of income describes the manner in which society's total personal income is divided among wages and salaries, corporate profits, proprietors' income, interest, and rents. T F

2. Dissaving means that personal consumption expenditures exceed after-tax income. T F

3. A durable good is defined as a good that has an expected life of three years or more. T F

4. A plant is defined as a group of firms under a single management. T F

5. An industry is a group of firms that produce the same or nearly the same products. T F

6. Limited liability refers to the fact that all members of a partnership are liable for the debts incurred by one another. T F

7. The corporate form of organization is the least used by firms in the United States. T F

8. Whether a business firm should incorporate or not depends chiefly on the amount of money capital it must have to finance the enterprise. T F

9. Bonds are shares of ownership in a corporation. T F

10. When the interests of the principals are the same as those of agents, there is a free-rider problem. T F

11. When the Federal government provides for a monetary system, it is doing so primarily to maintain competition. T F

12. Transfer payments are one means government uses to redistribute income. T F

13. If demand and supply reflected all the benefits and costs of producing a product, there would be efficient resource use. T F

14. When there are external costs, more resources are allocated to the production of the product and more is produced than is efficient. T F

15. One way for government to correct for external costs from a product is to increase its demand. T F

16. When there are external benefits from a product, there will be an overallocation of resources for its production. T F

17. One way for government to correct external benefits from a product is to subsidize consumers of the product. T F

18. Nonexcludability means government provides public goods so as to exclude private businesses from providing them. T F

19. Obtaining the benefits of private goods requires that they be purchased; obtaining benefits from public goods requires only that they be produced. T F

20. Government provides homeland defense services because these services have public benefits and because private producers of such services experience the free-rider problem. T F

21. When the Federal government takes actions to control unemployment or inflation it is performing the allocative function of government. T F

22. Government purchases of goods and services are called nonexhaustive expenditures and government transfer payments are called exhaustive expenditures. T F

23. When a government levies taxes and uses the tax revenue to make transfer payments, it shifts resources from the production of private goods to the production of public goods. T F

24. The chief source of revenue for the Federal government is the corporate income tax. T F

25. Property taxes are the largest percentage of the total revenues of local governments. T F

■ MULTIPLE-CHOICE QUESTIONS

Circle the letter that corresponds to the best answer.

1. The functional distribution for the United States shows that the largest part of the nation's earned income is

- (a) wages and salaries
- (b) proprietors' income
- (c) corporate profits
- (d) interest and rents

2. The part of after-tax income which is not consumed is defined as

- (a) saving
- (b) capital investment
- (c) wages and salaries
- (d) nondurable goods expenditure

3. If personal consumption expenditures were 80% of income and personal taxes were 8% of income, then personal savings would be

- (a) 8% of income
- (b) 10% of income
- (c) 12% of income
- (d) 88% of income

4. Consumer products that have expected lives of three years or more are

- (a) durable goods
- (b) nondurable goods
- (c) quasi-public goods
- (d) services

5. A firm owns and operates a farm growing wheat, a flour-milling plant, and a plant that bakes and sells bakery products. This firm would best be described as

- (a) a horizontally integrated firm
- (b) a vertically integrated firm
- (c) a conglomerate
- (d) a monopoly

6. Limited liability is associated with

- (a) sole proprietorships
- (b) partnerships
- (c) free-riders
- (d) corporations

7. Which form of business can most effectively raise money capital?

- (a) corporation
- (b) partnership
- (c) proprietorship
- (d) households

8. The separation of ownership and control in a corporation may create

- (a) a principal-agent problem
- (b) a free-rider problem
- (c) a monopoly
- (d) limited liability

9. One major means that government uses to deal with a monopoly is to

- (a) increase the demand for its product
- (b) decrease the supply of its product
- (c) stabilize incomes
- (d) regulate the firm

10. Government redistributes income through

- (a) limited liability
- (b) conglomerates
- (c) transfer payments
- (d) sole proprietorships

11. To redistribute income from high-income to low-income households, government might

- (a) increase transfer payments to high-income and decrease transfer payments to low-income households
- (b) increase the taxes paid by high-income households and increase the transfer payments to low-income households
- (c) increase the taxes paid by low-income households and decrease the taxes paid by high-income households
- (d) decrease the taxes paid by high-income households and decrease the transfer payments to low-income households

12. Which is the best example of a good or service providing the economy with an external cost?

- (a) a textbook
- (b) an automobile
- (c) a business suit
- (d) an audit of a business firm's books

13. Which economic situation would result in overallocation of resources to the production of a good?

- (a) a good with external benefits
- (b) a good with external costs
- (c) a good with free-rider problem
- (d) a good with an inflation problem

14. How does government correct for external benefits?

- (a) by taxing consumers
- (b) by taxing producers
- (c) by subsidizing producers
- (d) by separating ownership from control

15. Which is characteristic of public goods?

- (a) nonrivalry
- (b) excludability
- (c) limited liability
- (d) external costs

16. There is a free-rider problem when people

- (a) are willing to pay for what they want
- (b) are not willing to pay for what they want
- (c) benefit from a good without paying for its cost
- (d) want to buy more than is available for purchase in the market

17. Quasi-public goods are goods and services

- (a) that are indivisible
- (b) that have large external costs
- (c) that have large external benefits
- (d) that would not be produced by private producers through the market system

18. In the circular flow model, government provides goods and services and receives net taxes from

- (a) colleges and universities
- (b) businesses and households
- (c) resource and product markets
- (d) foreign nations and corporations

19. Which accounts for the largest percentage of all Federal expenditures?

- (a) health care
- (b) national defense

(c) interest on the public debt

(d) pensions and income security

20. Which is the largest source of the tax revenues of the Federal government?

- (a) payroll taxes
- (b) property taxes
- (c) sales and excise taxes
- (d) personal income taxes

21. A progressive tax is one where people with

- (a) lower incomes pay the same percentage of their income in taxes as people do with higher incomes
- (b) lower incomes pay a larger percentage of their income in taxes as people do with higher incomes
- (c) higher incomes pay a smaller percentage of their income in taxes than people do with higher incomes
- (d) higher incomes pay a larger percentage of their income in taxes than people do with lower incomes

Questions 22 and 23 are based on the tax table given below. [Note: Total tax is for the highest income in that tax bracket.]

Taxable income	Total tax
\$ 0	\$ 0
30,000	5,000
70,000	15,000
150,000	42,000

22. The marginal tax rate at the \$70,000 level of taxable income is

- (a) 16.6%
- (b) 21.4%
- (c) 25.0%
- (d) 28.0%

23. The average tax rate at the \$150,000 level of taxable income is

- (a) 21.4%
- (b) 28.0%
- (c) 31.5%
- (d) 33.8%

24. Which pair represents the chief source of income and the most important type of expenditure of state governments?

- (a) personal income tax and expenditures for hospitals
- (b) personal income tax and expenditures for highways
- (c) sales and excise taxes and expenditures for education
- (d) sales and excise taxes and expenditures for public safety

25. Which pair represents the chief source of income and the most important type of expenditure of local governments?

- (a) property tax and expenditures for highways
- (b) property tax and expenditures for education
- (c) sales and excise taxes and expenditures for public welfare
- (d) sales and excise taxes and expenditures for police, fire, safety, and general government

■ PROBLEMS

1. The following table shows the functional distribution of total income in the United States in a recent year.

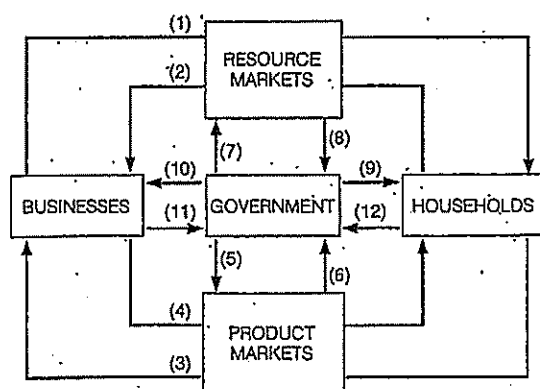
	Billions of dollars
Wages and salaries	\$ 7,874
Proprietors' income	1,043
Corporate profits	1,595
Interest	603
Rents	65
Total income	\$11,180

Of the total income about _____% were wages and salaries, and about _____% were corporate profits.

2. Following is a list of various government activities. Indicate in the space to the right of each into which of the five classes of government functions the activity falls. If it falls under more than one of the functions, indicate this.

- Maintaining an army _____
- Providing for a system of unemployment compensation _____
- Establishment of the Federal Reserve Banks _____
- Providing medical care for government employees _____
- Establishment of an Antitrust Division in the Department of Justice _____
- Making it a crime to sell stocks and bonds under false pretenses _____
- Providing low-cost lunches to school children _____
- Taxation of beer and wine _____
- Regulation of organized stock, bond, and commodity markets _____
- Setting tax rates higher for larger incomes than for smaller ones _____

3. The following circular flow diagram includes business firms, households, and the government (the public sector). Also shown are the product and resource markets.



a. Supply a label or an explanation for each of the 12 flows in the model:

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

b. If government wished to

- expand output and employment in the economy, it would increase expenditure flows _____ or _____, decrease net tax flows _____ or _____, or do both;
- increase the production of public goods and decrease the production of private goods in the economy, it would increase flows _____ and _____ or _____;
- redistribute income from high-income to low-income households, it would (increase, decrease) _____ the net taxes (taxes minus transfers) paid by the former and _____ the net taxes paid by the latter in flow _____.

4. In the following table are several levels of taxable income and hypothetical marginal tax rates for each \$1000 increase in income.

Taxable income	Marginal tax rate, %	Tax	Average tax rate, %
\$1500		\$300	20
2500	22	520	20.8
3500	25	_____	_____
4500	29	_____	_____
5500	34	_____	_____
6500	40	_____	_____

a. At the four income levels compute the tax and the average tax rate

b. As the marginal tax rate (1) increases the average tax rate (increases, decreases, remains constant) _____

(2) decreases the average tax rate _____

c. This tax is (progressive, regressive) _____ because the average tax rate increases as income (decreases, increases) _____

■ SHORT ANSWER AND ESSAY QUESTIONS

1. Explain the difference between a functional and a personal distribution of income. List the five major categories for functional income and their relative sizes. Describe the difference between the poorest and richest categories in the personal distribution of income.

2. In what ways do households dispose of their income? How is it possible for a family's personal consumption expenditures to exceed its after-tax income?

3. What is the difference between a plant and a firm? Between a firm and an industry?

4. Define the three legal forms of business organization.

5. Explain the advantages of corporations in terms of financing, liability, and longevity.

6. Explain what "separation of ownership and control" of the modern corporation means. What problem does this separation create for stockholders and managers?

7. How does government provide a legal framework and services for the effective operation of the economy?

8. What does the government do to maintain competition?

9. Why does the market system provide some people with lower incomes than it provides others?

10. What is meant by an externality in general and by an external cost and an external benefit in particular?

11. How does the existence of positive and negative externalities affect the allocation of resources and the prices of products?

12. What methods does government use to reallocate resources to take account of negative and positive externalities?

13. Distinguish between a private and a public good. Include in your answer an explanation of rivalry, excludability, and the free-rider problem.

14. What basic method does government in the United States use to reallocate resources away from the production of private goods and toward the production of public and quasi-public goods?

15. What is the macroeconomic stabilization function of government? What are the two policies that the government or the nation's central bank uses to address problems with unemployment or inflation?

16. How does politics affect the five economic functions of government in practice?

17. In a circular flow diagram that includes not only business firms and households but also government (or the public sector), what are the four flows of money into or out of the government sector of the economy? Using this diagram, explain how government redistributes income, reallocates resources from the private to the public sector, and stabilizes the economy.

18. Government expenditures fall into two broad classes: expenditures for goods and services and transfer payments. Explain the difference between these, and give examples of expenditures that fall into each of the two classes.

19. Explain precisely the difference between the marginal tax rate and the average tax rate.

20. Explain in detail the differences that exist among Federal, state, and local governments in the taxes on which they primarily rely for their revenues and the major purposes for which they use these revenues.

ANSWERS

Chapter 4 The U.S. Economy: Private and Public Sectors.

FILL-IN QUESTIONS

- households, sell, buy
- wages and salaries, rents
- poorest, richest
- consumption, saving, taxes (any order)
- durable, nondurable
- firms, sole proprietorship, corporation
- stocks, bonds, unlimited, unlimited
- principal-agent, principals, agents
- a. provide legal foundation; b. maintain competition; c. redistribute income; d. reallocate resources; e. stabilize the economy (any order for a-e)
- regulate, owner, antitrust
- unequal, transfer, market, income
- market; a. produces the "wrong" amounts of certain goods and services; b. fails to allocate any resources to the production of certain goods and services whose production is economically justified
- seller, buyer, external; a. (1) enact legislation, (2) pass special taxes; b. (1) subsidize consumers, (2) subsidize suppliers, (3) government financing or production of the product
- nonrivalry, nonexcludability, free-rider
- taxing, tax revenue
- increasing, decreasing, raising, lowering
- decreased, increased, exhaustive, nonexhaustive
- personal income, payroll, pensions and income security
- higher, lower, marginal, average
- sales, property, education

TRUE-FALSE QUESTIONS

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|-----------------|------------------|------------------|
| 1. F, pp. 73-74 | 10. F, pp. 77-78 | 19. T, p. 80 |
| 2. T, p. 74 | 11. F, p. 78 | 20. T, pp. 80-81 |
| 3. T, pp. 74-75 | 12. T, pp. 77-79 | 21. F, pp. 81-82 |
| 4. F, p. 75 | 13. T, p. 79 | 22. F, p. 83 |
| 5. T, p. 75 | 14. T, p. 79 | 23. F, p. 83 |
| 6. F, p. 76 | 15. F, pp. 79-80 | 24. F, pp. 85-87 |
| 7. F, p. 76 | 16. F, p. 80 | 25. T, p. 88 |
| 8. T, p. 76 | 17. T, p. 80 | |
| 9. F, p. 76 | 18. F, p. 80 | |